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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,017	04/08/2004	Andrew William McLauchlin	1330.1093D	7565

21171 7590 05/02/2007

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EXAMINER	
SAEED, USMAAN	

ART UNIT	PAPER NUMBER
2166	

MAIL DATE	DELIVERY MODE
05/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/820,017	MCLAUCHLIN, ANDREW WILLIAM	
	Examiner	Art Unit	
	Usmaan Saeed	2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Receipt of Applicant's Amendment, filed 2/05/2007 is acknowledged. Claims 1, 4, 7, and 10 have been amended. New claim 13 is added.

Claim Rejections - 35 USC § 112

2. The amended claims 1, 4, 7, and 10 were received on 2/05/2007 and are acceptable.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 4-5, 7-8, 10-11 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by **Matthew Morgenstern** (**Morgenstern** hereinafter) (U.S. Patent No. 5,970,490).

With respect to claim 1, **Morgenstern** teaches **a method, comprising:**

"dynamically surveying a data source" as a system user 8 may access the information bridge 1 in a variety ways. One way of accessing uses an optional browser 10, shown as a graphical interface to view and browse the combined uniform schema 11 and data obtained from multiple data sources 2, 4, and 6 (**Morgenstern** Col 5, Lines 49-53).

Further, **Morgenstern** teaches the relational parser object type include: 1) connecting to the database server, 2) opening the database, 3) issuing the query and opening the associated virtual or actual relation (the result of a query which joins relations is a virtual relation that is materialized by the database system), 4) iteratively accessing (retrieving or inserting/updating) each individual tuple and advancing the database cursor, 5) committing the transaction (for insert/update) to end the access, and 6) closing the database and disconnecting from the server. Steps 3 and 4 may be repeated for each of several queries before the subsequent completion steps are initiated (**Morgenstern** Col 28, Lines 24-40). Examiner interprets the iterative accessing as dynamic surveying.

Morgenstern also teaches constraints are used to make the active metadata repository respond to changes and events and to initiate actions dynamically (**Morgenstern** Col 36, Lines 57-60).

"dynamically generating a user interface, an application database, a reporting database and a baseline data schema based on the surveying of the data source" as the Database Integration System (DAISy) of the present invention provides both high-level user interfaces and program level access across heterogeneous databases (HDBs), allowing integration of a wide variety of information resources including relational and object databases (**Morgenstern** Col 3, Lines 7-11). One way of accessing uses an optional browser 10, shown as a graphical interface to view and browse the combined uniform schema 11 and data obtained from multiple data sources 2, 4, and 6 (**Morgenstern** Col 5, Lines 49-53) (**Morgenstern** Figures 1 and 2).

Further, **Morgenstern** teaches one of the capabilities available to the user is to dynamically view the progress of execution of an information bridge during the data transformation process (**Morgenstern** Col 31, Lines 23-27). Examiner interprets dynamic views as dynamic generation of interface because figure 4 of applicant's invention teaches updating of user interface as being dynamic. Examiner interprets updating or transformations of databases as dynamic generation of databases as described by applicant in figures 3 and 4.

"enabling interoperability among a plurality of application systems by mapping the application systems to the baseline data schema" as previous related

work in the database field can be grouped roughly into three areas: access to heterogeneous databases (HDBs), schema integration, and object encapsulation of existing systems. Access to HDBs: Language features for multidatabase interoperability include variables which range over both data and metadata, including relation and database names, and expanded view definitions with provisions for ***updatability*** (**Morgenstern** Col 2, Lines 20-27). In all cases, the data is mapped to an intermediate internal format. This also provides reusability of each information mediator to support multiple applications (**Morgenstern** Col 3, Lines 27-30 & Figure 1).

"providing access to the interoperability enabled application systems via the user interface using the application database and the reporting database" as figures 1 and 2 (**Morgenstern** Figures 1 and 2).

With respect to claim 2, **Morgenstern** teaches **"the method as recited in claim 1 wherein the surveying of the data source is initiated on demand"** as a system user 8 may access the information bridge 1 in a variety ways. One way of accessing uses an optional browser 10, shown as a graphical interface to view and browse the combined uniform schema 11 and data obtained from multiple data sources 2, 4, and 6 (**Morgenstern** Col 5, Lines 49-53). Examiner interprets that user is initiating access/survey as on demand.

Claim 5 is same as claim 2 and is rejected for the same reasons as applied hereinabove.

With respect to claim 4, **Morgenstern** teaches **a method, comprising:**

"dynamically surveying a data source to thereby capture changes to the data source" as a system user 8 may access the information bridge 1 in a variety ways. One way of accessing uses an optional browser 10, shown as a graphical interface to view and browse the combined uniform schema 11 and data obtained from multiple data sources 2, 4, and 6 (**Morgenstern** Col 5, Lines 49-53). Providing an interoperability assistant module with specifications for transforming the source data, transforming the source data into a common intermediate representation of the data using the specifications, transforming the intermediate representation of the data into a specialized target representation using the specifications (**Morgenstern** Col 2, Lines 63-67).

Further, **Morgenstern** teaches the relational parser object type include: 1) connecting to the database server, 2) opening the database, 3) issuing the query and opening the associated virtual or actual relation (the result of a query which joins relations is a virtual relation that is materialized by the database system), 4) iteratively accessing (retrieving or inserting/updating) each individual tuple and advancing the database cursor, 5) committing the transaction (for insert/update) to end the access, and 6) closing the database and disconnecting from the server. Steps 3 and 4 may be repeated for each of several queries before the subsequent completion steps are initiated (**Morgenstern** Col 28, Lines 24-40). Examiner interprets the iterative accessing as dynamic surveying.

Morgenstern also teaches constraints are used to make the active metadata repository respond to changes and events and to initiate actions dynamically (**Morgenstern** Col 36, Lines 57-60).

"dynamically updating a user interface based on the captured changes" as constraints are used to make the active metadata repository respond to changes and events and to initiate actions dynamically (**Morgenstern** Col 36, Lines 57-59) (**Morgenstern** Figures 1 and 2).

Further, **Morgenstern** teaches one of the capabilities available to the user is to dynamically view the progress of execution of an information bridge during the data transformation process (**Morgenstern** Col 31, Lines 23-27). Examiner interprets dynamic views as dynamic generation of interface because figure 4 of applicant's invention teaches updating of user interface as being dynamic.

"dynamically updating an application database and a reporting database based on the captured changes" as constraints are used to make the active metadata repository respond to changes and events and to initiate actions dynamically (**Morgenstern** Col 36, Lines 57-59) (**Morgenstern** Figures 1 and 2).

Examiner interprets updating or transformations of databases as dynamic generation of databases as described by applicant in figures 3 and 4.

"dynamically updating an interoperability engine baseline data schema based on the captured changes" as constraints are used to make the active metadata repository respond to changes and events and to initiate actions dynamically (**Morgenstern** Col 36, Lines 57-59). Schema Integration: Database design tools have

been applied to schema integration, and related work formalizes interdatabase dependencies and schema merging (**Morgenstern** Col 2, Lines 36-48) (**Morgenstern** Figures 1 and 2).

"allocating space in the application database for the captured changes" as figures 1 and 2 reference numeral 70 (**Morgenstern** Figures 1 and 2).

"applying an integration unit mapping application systems to the baseline data schema" as previous related work in the database field can be grouped roughly into three areas: access to heterogeneous databases (HDBs), schema integration, and object encapsulation of existing systems. Access to HDBs: Language features for multidatabase interoperability include variables which range over both data and metadata, including relation and database names, and expanded view definitions with provisions for updatability (**Morgenstern** Col 2, Lines 20-27).

"providing access to the mapped application systems via the user interface using the updated application database and the updated reporting database" as figures 1 and 2 (**Morgenstern** Figures 1 and 2).

Claims 7-8, 10-11 and 13 are essentially the same as claim 1-2 and 4-5, except they set forth the claimed invention as a product on a computer readable storage medium and an apparatus and are rejected for the same reasons as applied hereinabove.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3, 6, 9, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Matthew Morgenstern** (U.S. Patent No. 5,970,490) as applied to claims 1-2, 4-5, 7-8, 10-11 and 13 in view of **Yudenfriend et al**. (**Yudenfriend** hereinafter) (U.S Patent No. 6,338,151).

With respect to claim 3, **Morgenstern** does not explicitly teach, **"the method as recited in claim 1, wherein the surveying of the data source is regularly initiated."**

However, **Yudenfriend** discloses **"the method as recited in claim 1, wherein the surveying of the data source is regularly initiated"** as the collected data is further examined at regular intervals to determine if one or more actions are to be taken (**Yudenfriend** Col 10, Lines 44-46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of the cited references because **Yudenfriend's** teachings would have allowed **Morgenstern** to provides up to date or

current data source with current schema by examining the data source at regular intervals.

Claim 6 is same as claim 3 and is rejected for the same reasons as applied hereinabove.

Claims 9 and 12 are essentially the same as claim 3 and 6, except they set forth the claimed invention as a product on a computer readable storage medium and are rejected for the same reasons as applied hereinabove.

Response to Arguments

5. Applicant's arguments filed on 2/05/2007 have been fully considered but they are not persuasive.

In these arguments applicant relies on the amended claims and not the original ones.

Claims must be given the broadest reasonable interpretation during examination and limitations appearing in the specification but not recited in the claim are not read into the claim (See M.P.E.P. 2111 [R-I]).

Applicant argues that **Morgenstern** does not teach, **"(a) dynamically survey a data source, and (b) dynamically generate a user interface, an application**

database, a reporting database and a baseline data schema based on the surveying of the data source."

In response to the preceding arguments examiner respectfully submits that **Morgenstern** teaches **"dynamically surveying a data source"** as a system user 8 may access the information bridge 1 in a variety ways. One way of accessing uses an optional browser 10, shown as a graphical interface to view and browse the combined uniform schema 11 and data obtained from multiple data sources 2, 4, and 6 (**Morgenstern** Col 5, Lines 49-53).

Further, **Morgenstern** teaches the relational parser object type include: 1) connecting to the database server, 2) opening the database, 3) issuing the query and opening the associated virtual or actual relation (the result of a query which joins relations is a virtual relation that is materialized by the database system), 4) iteratively accessing (retrieving or inserting/updating) each individual tuple and advancing the database cursor, 5) committing the transaction (for insert/update) to end the access, and 6) closing the database and disconnecting from the server. Steps 3 and 4 may be repeated for each of several queries before the subsequent completion steps are initiated (**Morgenstern** Col 28, Lines 24-40).

Examiner interprets the iterative accessing as dynamic surveying.

Morgenstern also teaches constraints are used to make the active metadata repository respond to changes and events and to initiate actions dynamically (**Morgenstern** Col 36, Lines 57-60).

"dynamically generating a user interface, an application database, a reporting database and a baseline data schema based on the surveying of the data source" as the Database Integration System (DAISy) of the present invention provides both high-level user interfaces and program level access across heterogeneous databases (HDBs), allowing integration of a wide variety of information resources including relational and object databases (**Morgenstern** Col 3, Lines 7-11). One way of accessing uses an optional browser 10, shown as a graphical interface to view and browse the combined uniform schema 11 and data obtained from multiple data sources 2, 4, and 6 (**Morgenstern** Col 5, Lines 49-53) (**Morgenstern** Figures 1 and 2).

Further, **Morgenstern** teaches one of the capabilities available to the user is to dynamically view the progress of execution of an information bridge during the data transformation process (**Morgenstern** Col 31, Lines 23-27).

Examiner interprets dynamic views as dynamic generation of interface because figure 4 of applicant's invention teaches updating of user interface as being dynamic. Examiner interprets updating or transformations of databases as dynamic generation of databases as described by applicant in figures 3 and 4.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usmaan Saeed whose telephone number is (571)272-4046. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571)272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Usmaan Saeed
Patent Examiner
Art Unit: 2166

Leslie Wong LW
Primary Examiner

US
April 27, 2007

MOHAMMAD ALI
PRIMARY EXAMINER